Azimuthal and pseudorapidity correlations of high p_t particles in Au+Au collisions at 130AGeV

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Abstract

The production mechanism of particles with large transverse momenta in heavy-ion collisions is expected to be of major interest at RHIC energies. Modifications to the high-p_t spectrum shape should provide important information on minijet production and quenching. To investigate the prduction mechanism in detail – to what degree is production by hard-parton scattering or by transverse flow – two-particle correlation studies on pseudorapidity and azimuth provide essential information. STAR minimum-bias data at $\sqrt{s_{NN}} = 130\ GeV$ have been analyzed for particles with $p_t > 1.5\ GeV/c$. Correlation dependence on particle p_t, collision centrality and emission angle with respect to the reaction plane is studied. Results are compared with model predictions.

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